A Quality Control Study: Outcomes of Efforts to Improve Communication in the Cardiac Catheterization Lab

Molly Casey MS3, Andrew Doorey MD

INTRODUCTION

- Closed-loop communication (read backs) is an efficient and effective way of confirming the medical staff heard the physician order correctly.
- It's implantation can limit potentially devastating mistakes.

METHOD

- This was an observational study that occurred at one location.
- A third-party observer recorded the rate of closed-loop communication over four weeks in the summer of 2019.
- Responses by medical staff to physician medication, equipment, and other miscellaneous orders were categorized as complete, partial from partial, partial, acknowledged, or no response.
- The acuity of the case and the number of personnel in the control room were also noted.
- Grand rounds and individual performance statistics were used during week three as improvement efforts to educate the catheterization lab team on the importance of read backs and encourage personal accountability, respectively.
- The effect of these variables and success of these interventions were assessed.

RESULTS & DISCUSSION

- Before grand rounds and performance reports, 108 of 149 (72%) medication orders and 195 of 268 (73%) equipment orders were recorded as complete.

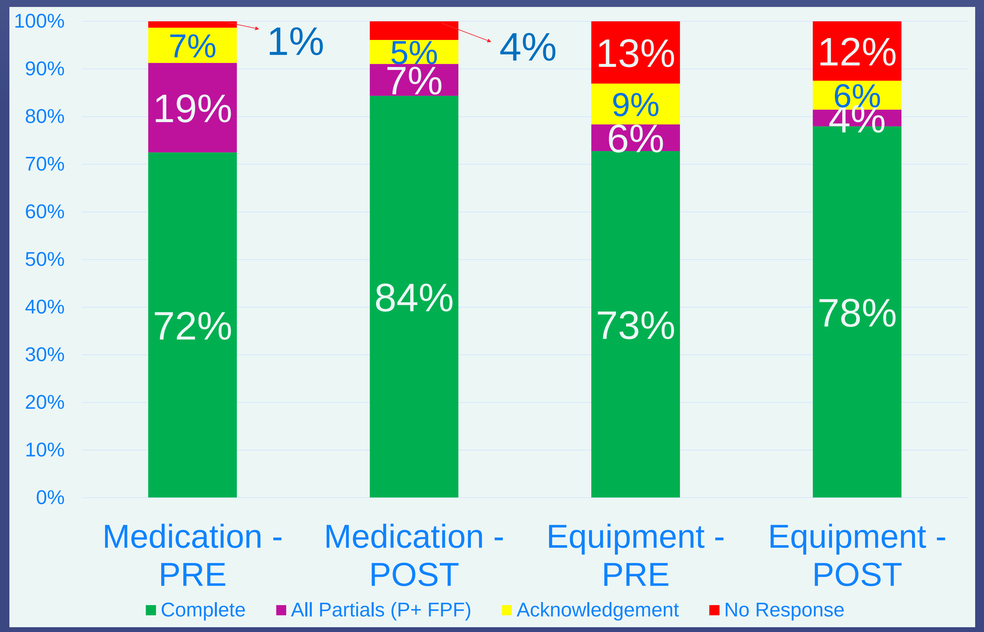

Figure 1: Comparisons of before and after Grand Rounds (Retraining)

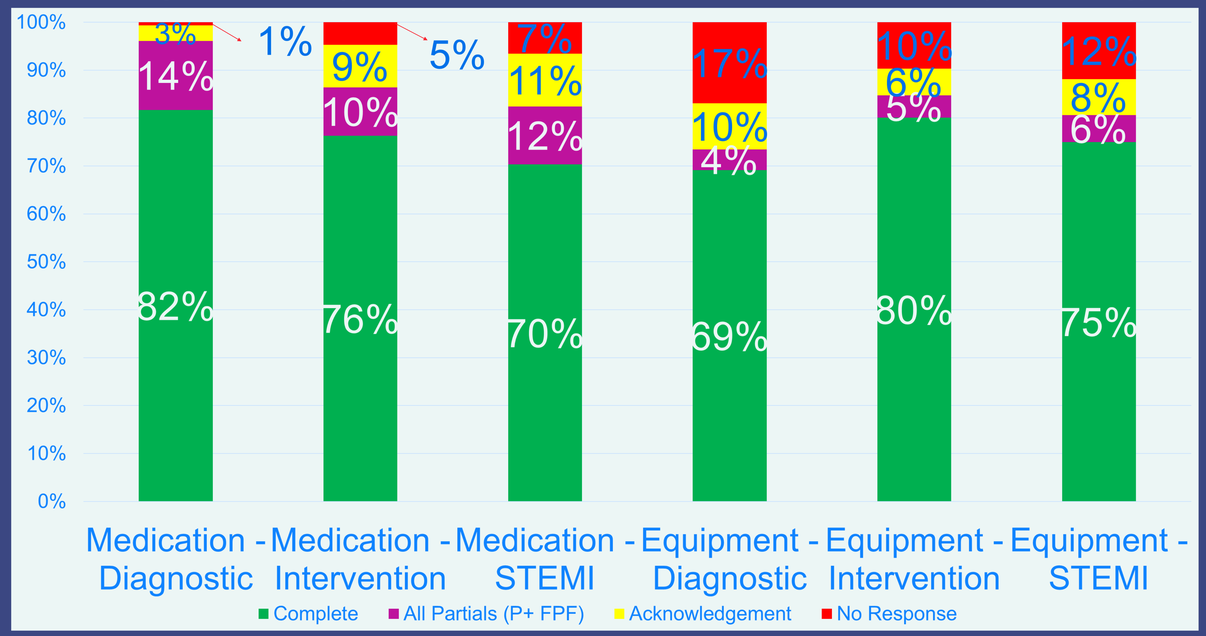

Figure 2: Acuity Comparison

RESULTS & DISCUSSION Continued

- Following these improvement efforts, 151 of 179 (84%) medication orders (X^2=6.902, p=0.009) and 244 of 313 (78%) equipment orders (X^2=2.172, p=0.141) were recorded as complete. See Figure 1.
- 82%, 76%, and 70% of medication orders were complete for non-STEMI (diagnostic, interventional) and STEMI cases, respectively (X^2=2.930, p=0.87).
- 69%, 80%, and 75% of equipment orders were complete for non-STEMI (diagnostic, interventional), and STEMI cases, respectively (X^2=0.029, p=0.864). See Figure 2.
- The addition of one or two extra personnel in the control room was associated with a decrease in the number of complete equipment and other miscellaneous orders from 84% to 74% (X^2=2.076, p=0.150).

CONCLUSION

- There was a statistically significant improvement in complete read backs following Grand Rounds and performance statistics for medication orders but not equipment orders.
- No statistically significant difference was found between the acuity level of the case or the number of people in the control room over one and the rate of complete read backs.

FUTURE DIRECTIONS

- This was the fifth of five phases of assessing the success of closed-loop communication implementation in the Cardiac Catheterization Lab at one location.
- Future analyses intend to compare the success of phase five to previous phases.